

Online Experiments

Sönke Ehret

CESS

Experimental Methods Lab Trinity 2017

WHY ONLINE (VS LAB)?

WHY ONLINE (VS LAB)?

- 1 Larger number of subjects

WHY ONLINE (VS LAB)?

- 1 Larger number of subjects
- 2 More representative samples (e.g. Krupnikov and Levine 2014, Mutz 2011, but Barabas and Jerit 2010)

WHY ONLINE (VS LAB)?

- 1 Larger number of subjects
- 2 More representative samples (e.g. Krupnikov and Levine 2014, Mutz 2011, but Barabas and Jerit 2010)
- 3 Lower cost per subjects
 - vs other modes of surveys
 - vs traditional lab experiments

WHY ONLINE (VS LAB)?

- 1 Larger number of subjects
- 2 More representative samples (e.g. Krupnikov and Levine 2014, Mutz 2011, but Barabas and Jerit 2010)
- 3 Lower cost per subjects
 - vs other modes of surveys
 - vs traditional lab experiments
- 4 Revolving subject pool

WHY NOT ONLINE?

- ❶ Difficulty in controlling environment
 - Clifford and Jerit (2015)
 - Berinsky, Margolis, and Sances (2014)
- ❷ Need to be careful about fraud?
 - How to prevent one person take the same experiment twice?
 - How to know that the subjects are real (c.f. bots, multiple accounts)?
- ❸ Privacy concerns
- ❹ Technical requirements, e.g. mobile devices vs. desktop, browser type etc.

WHAT DO YOU NEED TO RUN ONLINE EXPERIMENTS?

- Method of subject recruitment and payment system
- Webpage
 - Survey for non-interactive studies(e.g. Qualtrics)
 - Virtual lab for interactive experiments (e.g. Otree, Nodegame)

- Qualtrics
- Randomization, Embedded Data and Panels
- Advanced Experiments and Customization
- Recruiting Subjects with Mturk

WHAT IS QUALTRICS?

Survey Software Research Tool

WHAT IS QUALTRICS?

Survey Software Research Tool

- Questionnaires

WHAT IS QUALTRICS?

Survey Software Research Tool

- Questionnaires
- Panels and Longitudinal Studies
 - Sampling

WHAT IS QUALTRICS?

Survey Software Research Tool

- Questionnaires
- Panels and Longitudinal Studies
 - Sampling
- Privacy protection sufficient for non-medical IRB. Standard version not HIPAA-certified.
- No programming (on surface)
- Easy distribution

ACCESSING QUALTRICS

- CESS maintains limited number of licenses
- www.qualtrics.com
- Free trial account, but has limits (e.g, cannot export dataset!)
- Alternatives: surveymonkey, limesurvey
- No limits for number of respondents, surveys
- Technical limits though.

- Qualtrics Support: www.qualtrics.com/support
- Email Qualtrics Support: support@qualtrics.com
- <http://sites.cognitivescience.co/qualtrics/>

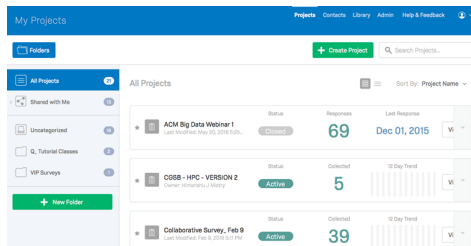
NAVIGATING WITHIN QUALTRICS

NAVIGATING WITHIN QUALTRICS

- Projects: Contains the survey questionnaires

NAVIGATING WITHIN QUALTRICS

- Projects: Contains the survey questionnaires
- Contacts: A spreadsheet used for survey distribution to a panel.
 - Sampling
 - Researcher-defined values
 - Can be populated by subject responses
- Library: Contains saved questions, images, messages, and other material to be shared across surveys



CREATE A PROJECT

- New Project
- Existing Project
 - From a Copy
 - From a Library
 - From a File

The screenshot shows a 'Create a Project' dialog box. On the left, there is a sidebar with a blue header 'New Project' and three options: 'From a Copy', 'From a Library', and 'From a File'. The 'New Project' option is selected. The main area is titled 'Create a Project from Scratch' and contains two input fields: 'Project Name' with the text 'Untitled Project' and 'Folder' with a dropdown arrow. At the bottom right, there are two buttons: 'Cancel' and 'Create Project'.

FLOW, BLOCKS AND QUESTIONS

FLOW, BLOCKS AND QUESTIONS

Question

An input and output field with several options for display. Allows for choice randomization, choosing default choices, skip/carry on/display logic and Javascript customization.

FLOW, BLOCKS AND QUESTIONS

Question

An input and output field with several options for display. Allows for choice randomization, choosing default choices, skip/carry on/display logic and Javascript customization.

Block

Section of questions that are placed together in the survey to better organize the order and presentation of questions. Question order within a block can be randomized. Can loop through the same question over database fields within a block. Set look of "Next" and "Previous" button globally on Block level

FLOW, BLOCKS AND QUESTIONS

Question

An input and output field with several options for display. Allows for choice randomization, choosing default choices, skip/carry on/display logic and Javascript customization.

Block

Section of questions that are placed together in the survey to better organize the order and presentation of questions. Question order within a block can be randomized. Can loop through the same question over database fields within a block. Set look of "Next" and "Previous" button globally on Block level

Survey Flow

The order in which the survey appears on the block level. Can add branching, embedded data, randomization, data fields from web services (RSS), authenticator, conjoint etc. to change the order and logic of the survey Blocks.

Programming an example survey

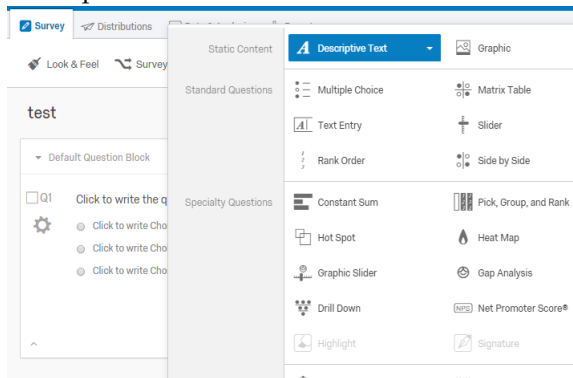
CREATING A CONSENT FORM

- Procedures
- Risk / Discomforts
- Benefits
- Confidentiality
- Compensation
- Participation
- Questions about the Research
- Agreement

CREATING A CONSENT FORM

- Procedures
- Risk / Discomforts
- Benefits
- Confidentiality
- Compensation
- Participation
- Questions about the Research
- Agreement

select "Q1" → Change Question Type → Descriptive Text



SKIP LOGIC AND CONDITIONALS

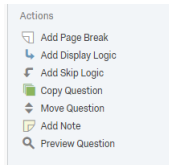
Add a second question.

Choose "Multiple Choice" → Single Answer, Horizontal.

- 1 Add two answers: "Yes" and "No"
- 2 Choose "Add Skip Logic"

Set

that answer to "no" → leads to survey end





Participation in this study is voluntary. You may refuse to participate or withdraw at any time without penalty, by closing the browser window. For questionnaires or surveys, you have the right to skip or not answer any questions you prefer not to answer. However, you will not be paid unless you finish the survey questionnaire.


☐ Q61 Do you want to participate?

☐ yes

☐ no





 If no Is Selected, Then Skip To End of Survey

ADDING QUESTIONS

Question Types

- Descriptive Text
- Text Entry
- Graphic
- Multiple Choice
- Matrix Table

ADDING QUESTIONS

Question Types

- Descriptive Text
- Text Entry
- Graphic
- Multiple Choice
- Matrix Table




Responses Types

- Number of Choices
- Display of Answers
- Positioning
- Forced Response
- Other Validation Options

Add a one-choice draggable bar slider on $[0,100]$ with grid lines set to 20. Label the question and choice texts with *Choose a tax rate*. Set default choice to 50. Allow for "Not Applicable" answer and change its text into "Refuse to answer". Remove scale point labels on top of slider. Force the response.


Add a one-choice draggable bar slider on $[0,100]$ with grid lines set to 20. Label the question and choice texts with *Choose a tax rate*. Set default choice to 50. Allow for "Not Applicable" answer and change its text into "Refuse to answer". Remove scale point labels on top of slider. Force the response.

☐ Q4 Choose a tax rate



Refuse to answer

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Choose a tax rate  50

Page Break

DISPLAY LOGIC

Add two *text entry* questions:

DISPLAY LOGIC

Add two *text entry* questions:

First Question

Why did you lower the tax rate?

→ Display Logic: Tax rate is lower than 50. Click "In Page"

Display Logic (Why did you choose to lower the tax rate?)

Display this Question only if the following condition is met:

If

Q4 Choose a tax rate ▾

Choose a tax rate ▾

is

Less Than ▾

50

⊖ ⊕

☒ In Page

Close

DISPLAY LOGIC

Add two *text entry* questions:

First Question

Why did you lower the tax rate?

→ Display Logic: Tax rate is lower than 50. Click "In Page"

Display Logic (Why did you choose to lower the tax rate?)

Display this Question only if the following condition is met:

If

Q4 Choose a tax rate ▾

Choose a tax rate ▾

Is

Less Than ▾

50

⊖ ⊕

☒ In Page

Close

Second Question

Why did you increase the tax rate?

→ Display Logic: Tax rate is higher than 50. Click "In Page"

Display Logic (Why did you choose to increase the tax rate?)

Display this Question only if the following condition is met:

If

Q4 Choose a tax rate ▾

Choose a tax rate ▾

Is

Greater Than ▾

50

⊖ ⊕

☒ In Page

Close

BLOCKS

Create three new blocks.

BLOCKS

Create three new blocks.

First Block

Enter Multiple choice, two options: 8 out of 10 US citizens prefer taxes *higher* [use italics] than 50% Do you wish to reconsider your choice? "Yes" or "No"

BLOCKS

Create three new blocks.

First Block

Enter Multiple choice, two options: 8 out of 10 US citizens prefer taxes *higher* [use italics] than 50% Do you wish to reconsider your choice? "Yes" or "No"

Second Block

Enter Multiple choice, two options: 8 out of 10 US citizens prefer taxes *lower* [use italics] than 50% Do you wish to reconsider your choice? "Yes" or "No"

BLOCKS

Create three new blocks.

First Block

Enter Multiple choice, two options: 8 out of 10 US citizens prefer taxes *higher* [use italics] than 50% Do you wish to reconsider you choice? "Yes" or "No"

Second Block

Enter Multiple choice, two options: 8 out of 10 US citizens prefer taxes *lower* [use italics] than 50% Do you wish to reconsider you choice? "Yes" or "No"

Third Block

Enter Likert scale, single answer, one statement. Use automatic scale points. Label choice text: I like to conform with others

SURVEY FLOW - RANDOMIZER

- 1 Survey Flow → Add → Randomizer below Default Question Block
- 2 Drag Block 1 and Block 2 under the Randomizer using "Move".
- 3 Set the Randomizer to "Randomly present 1 element". Select "Evenly present elements"

SURVEY FLOW - RANDOMIZER

- 1 Survey Flow → Add → Randomizer below Default Question Block
- 2 Drag Block 1 and Block 2 under the Randomizer using "Move".
- 3 Set the Randomizer to "Randomly present 1 element". Select "Evenly present elements"

Survey Flow test

The screenshot displays the Survey Flow editor interface. At the top, there is a grey block labeled "Show Block: Default Question Block (5 Questions)" with options "Add Below", "Move", "Duplicate", and "Delete". Below it is a purple "Randomizer" block. Inside the Randomizer, it says "Randomly present 1 of the following elements" (with a dropdown set to 1) and "Evenly Present Elements" is checked. Below the Randomizer are three grey blocks: "Show Block: Block 1 (1 Question)", "Show Block: Block 2 (1 Question)", and "Show Block: Block 3 (1 Question)". Each of these blocks has "Add Below", "Move", "Duplicate", and "Delete" options. A green "+ Add a New Element Here" link is visible below Block 2 and at the bottom of the list.

SURVEY FLOW - BRANCH LOGIC

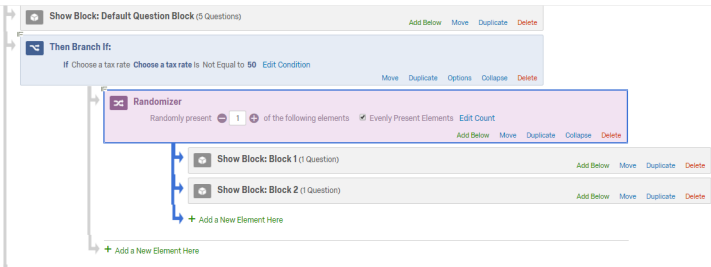
- 1 Survey Flow → Add → Branch Logic below Default Question Block - above Randomizer
- 2 Add Condition → Choose a Tax rate → Not Equal to 50.
- 3 Move Randomizer under Branch Logic

SURVEY FLOW - BRANCH LOGIC

- 1 Survey Flow → Add → Branch Logic below Default Question Block - above Randomizer
- 2 Add Condition → Choose a Tax rate → Not Equal to 50.
- 3 Move Randomizer under Branch Logic

Survey Flow test

Zoom UI
Shr



Save the Flow and test your survey using "Preview Survey"

Embedded Data

Embedded Data is any extra information you would like recorded in addition to the question responses. Embedded Data consists of a field and a value. The field is the name of your variable (e.g., Gender, State, Status). The value is what your field will be set to in your data. ED can have multiple values (e.g., a field called Status might have a value of either Screened Out, or Good Complete).

Embedded Data

Embedded Data is any extra information you would like recorded in addition to the question responses. Embedded Data consists of a field and a value. The field is the name of your variable (e.g., Gender, State, Status). The value is what your field will be set to in your data. ED can have multiple values (e.g., a field called Status might have a value of either Screened Out, or Good Complete). Examples:

- The social media site a respondent has come from
- The condition a respondent was assigned to in a research study
- Previously gathered information from a contact list so that data will be available for analysis.

Piped Text

Qualtrics stores internal information during the survey. This information can be *displayed* to subjects. Example

- Previous survey responses, after page break or from previous Block
- Geo IP, date and time
- Default information from contact list fields
- Loops
- Embedded Data

Some of these elements can also be changed with input fields. But we need to know Javascript for that.

- Modify the "8 out of 10 US citizens prefer" Question in Block 1 and Block 2 to show the previously chosen tax rate.
- Text Field → Piped Text → Survey Question → Q4 Choose a Tax Rate → Q4 Choose a Tax Rate:

- Modify the "8 out of 10 US citizens prefer" Question in Block 1 and Block 2 to show the previously chosen tax rate.
- Text Field → Piped Text → Survey Question → Q4 Choose a Tax Rate → Q4 Choose a Tax Rate:
- $\$ \{q://QID4/ChoiceNumericEntryValue/1\}$

EMBEDDED DATA - CREATE RANDOM INTEGER

EMBEDDED DATA - CREATE RANDOM INTEGER

- 1 In "Survey Flow" create "Embedded Data" under the first Block and move the "Embedded Data" section to the top of the flow.

EMBEDDED DATA - CREATE RANDOM INTEGER

- 1 In "Survey Flow" create "Embedded Data" under the first Block and move the "Embedded Data" section to the top of the flow.
- 2 Field name:random

EMBEDDED DATA - CREATE RANDOM INTEGER

- 1 In "Survey Flow" create "Embedded Data" under the first Block and move the "Embedded Data" section to the top of the flow.
- 2 Field name: random
- 3 Field value: `${rand://int/1000:9999}`

EMBEDDED DATA - CREATE RANDOM INTEGER

- 1 In "Survey Flow" create "Embedded Data" under the first Block and move the "Embedded Data" section to the top of the flow.
- 2 Field name:random
- 3 Field value: `${rand://int/1000:9999}`
- 4 Create a Branch Logic under Block 3 (conformity question). It has the condition "If random Greater or Equal than to 9000".

EMBEDDED DATA - CREATE RANDOM INTEGER

- 1 In "Survey Flow" create "Embedded Data" under the first Block and move the "Embedded Data" section to the top of the flow.
- 2 Field name: random
- 3 Field value: `${rand://int/1000:9999}`
- 4 Create a Branch Logic under Block 3 (conformity question). It has the condition "If random Greater or Equal than to 9000".
- 5 Under the Branch Logic create a new "End of Survey Element"
- 6 Save Flow

EMBEDDED DATA

Set Embedded Data:

random = $\text{floor}(\text{rand}/1000/9999)$

[Add a New Field](#)

[Add Below](#) [Move](#) [Duplicate](#) [Add From Contacts](#) [Options](#) [Delete](#)

Show Block: Default Question Block (5 Questions)

[Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Then Branch If:

If Choose a tax rate Choose a tax rate is Not Equal to 50 [Edit Condition](#)

[Move](#) [Duplicate](#) [Options](#) [Collapse](#) [Delete](#)

Randomizer

Randomly present ☐ 1 of the following elements ☒ Evenly Present Elements [Edit Count](#)

[Add Below](#) [Move](#) [Duplicate](#) [Collapse](#) [Delete](#)

Show Block: Block 1 (1 Question)

[Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Show Block: Block 2 (1 Question)

[Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

[+ Add a New Element Here](#)

[+ Add a New Element Here](#)

Show Block: Block 3 (1 Question)

[Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Then Branch If:

If random is Greater Than or Equal to 9000 [Edit Condition](#)

[Move](#) [Duplicate](#) [Options](#) [Collapse](#) [Delete](#)

End of Survey

[Move](#) [Duplicate](#) [Customize](#) [Delete](#)

[+ Add a New Element Here](#)

CUSTOMIZE THE END OF SURVEY MESSAGE

- Navigate to Library → Messages Library → New Message
- Select Message Type "End of Survey Message"
- Give it a title ("Win 10\$") and text → "create message"
- In Survey Flow, navigate to end of survey message, choose custom message

CUSTOMIZE THE END OF SURVEY MESSAGE

- Navigate to Library → Messages Library → New Message
- Select Message Type "End of Survey Message"
- Give it a title ("Win 10\$") and text → "create message"
- In Survey Flow, navigate to end of survey message, choose custom message
- In 10% of cases, subjects will receive now a message on \$10 extra payment.

ADDITIONAL DESIGN FEATURES

- Look and Feel
 - Question Separator
 - Progress Bar
 - To Insert a customized skin
 - Header / Footer

ADDITIONAL DESIGN FEATURES

- Look and Feel
 - Question Separator
 - Progress Bar
 - To Insert a customized skin
 - Header / Footer
 - Cascading Style Sheets (CSS)
 - Example: In CSS Editor, enter `html.Skin#Logo{display : none; }` to remove default logo
- Survey Options

ADDITIONAL DESIGN FEATURES

- Look and Feel
 - Question Separator
 - Progress Bar
 - To Insert a customized skin
 - Header / Footer
 - Cascading Style Sheets (CSS)
 - Example: In CSS Editor, enter `html.Skin#Logo{display : none; }` to remove default logo
- Survey Options
 - Survey Experience

ADDITIONAL DESIGN FEATURES

- Look and Feel
 - Question Separator
 - Progress Bar
 - To Insert a customized skin
 - Header / Footer
 - Cascading Style Sheets (CSS)
 - Example: In CSS Editor, enter `html.Skin#Logo{display : none; }` to remove default logo
- Survey Options
 - Survey Experience
 - Survey Protection

ADDITIONAL DESIGN FEATURES

- Look and Feel

- Question Separator
- Progress Bar
- To Insert a customized skin
- Header / Footer
- Cascading Style Sheets (CSS)
 - Example: In CSS Editor, enter `html.Skin#Logo{display : none; }` to remove default logo

- Survey Options

- Survey Experience
- Survey Protection
- Survey Termination

DISTRIBUTION & CONTACTS

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list
- 3 Personal link: instead of using emails, extract individual, traceable links for each contact list members.

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list
- 3 Personal link: instead of using emails, extract individual, traceable links for each contact list members.
- 4 SMS. New feature that allows sending and receiving questions and responses via messaging. Needs to be manually enabled by CESS

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list
- 3 Personal link: instead of using emails, extract individual, traceable links for each contact list members.
- 4 SMS. New feature that allows sending and receiving questions and responses via messaging. Needs to be manually enabled by CESS
- 5 Social Media

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list
- 3 Personal link: instead of using emails, extract individual, traceable links for each contact list members.
- 4 SMS. New feature that allows sending and receiving questions and responses via messaging. Needs to be manually enabled by CESS
- 5 Social Media
- 6 Offline app. Works on smartphone or tablet without internet.

DISTRIBUTION & CONTACTS

- 1 Anonymous Link: Generic link to be accessed at the point of recruitment, e.g. website, email, social media. No association with panel possible
- 2 Email: send customized email from within Qualtrics. Recipients are from contact list
- 3 Personal link: instead of using emails, extract individual, traceable links for each contact list members.
- 4 SMS. New feature that allows sending and receiving questions and responses via messaging. Needs to be manually enabled by CESS
- 5 Social Media
- 6 Offline app. Works on smartphone or tablet without internet.
- 7 QR code: alternative to anonymous link

Email Survey from Qualtrics Mailer

- Upload List or Enter Contacts
- Maximum Number of Emails = 10.000 per week
- Adjustable: From Name, Reply-to Email, Subject
- Not Adjustable: From Address
- Show Advanced Options → Anonymous

Reminders & Thank you Notes

CONTACTS

- Contacts → Create Contact List
- Import or create manually
- Send emails to contact list
- Generate individualized links for each row in pre-populated contact list

CONTACTS

- Contacts → Create Contact List
- Import or create manually
- Send emails to contact list
- Generate individualized links for each row in pre-populated contact list

Add Contacts

Import From a File **Add Manually** Import From a Survey

Email	First Name	Last Name	External Data Reference	Language	+

Viewing Rows 1 - 10 of 10

Skip this step [Add Contacts](#)

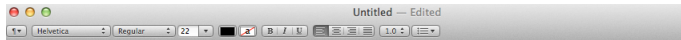
- Track History of Participation
- Trace Bounce Backs
- Smaller Subsets to Manage
- Reuse list of people for automated Reminders & Thank you notes
- Individual owner specific, therefore are not shared with collaboration

LINKS WITH DATA FIELDS

- Can feed customized information from survey distribution link into embedded data
- Works at start of survey
 - 1 Retrieve anonymous link from your survey, e.g.
https://nyu.qualtrics.com/SE/?SID=SV_5mVtvXJawZoF49L
 - 2 Append to link a data field using ? and the value using "=". Use & to attach additional fields:
https://nyu.qualtrics.com/SE/?SID=SV_5mVtvXJawZoF49L&field=value
 - 3 Under "Survey Flow" create embedded data field at beginning of survey. Field name: "field". Leave "value" open
 - 4 Subjects using the modified link will set "field" to "value"

EXAMPLE: LINKS WITH DATA FIELDS

EXAMPLE: LINKS WITH DATA FIELDS

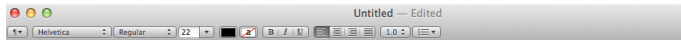


http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&

EXAMPLE: LINKS WITH DATA FIELDS



`http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&`



`http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&Source`

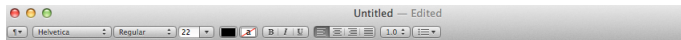
EXAMPLE: LINKS WITH DATA FIELDS



http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&



http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&Source

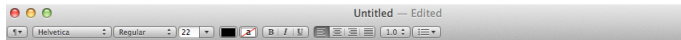


http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&Source=Facebook

EXAMPLE: LINKS WITH DATA FIELDS



http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&

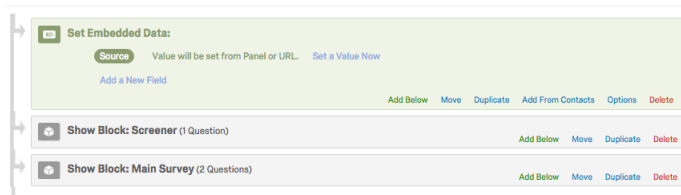


http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&Source



http://survey.qualtrics.com/SE/?SID=SV_SV_4UPDW34d8D&Source=Facebook

Survey Flow CSAT Q1



ADVANCED USES OF EMBEDDED DATA

- Use Authenticator under Survey Flow to set login information for external websites. Retrieve data fields from those websites, e.g. facebook
- Use Webservice under Survey Flow to access rectangular XML or RSS fields from an external URL during the survey.
- Use end-of survey auto-forward to pass information to another survey (or same survey) via link fields
- Loops

Rectangular

- Data & Analysis
- Export & Import → Export Data with Legacy Format
- "More Options"

Reporting

- Reports
- Real Time
- Send via email or link: feedback

LOOP & MERGE

- Loop & Merge
- Use on Block level

LOOP & MERGE

- Loop & Merge
- Use on Block level
- Idea: loop through “Fields” repeatedly. Each Field represents a column, loop is over values (rows).
- Can randomize number of loops and number of elements from loop
- Have to pre-populate loop or draw values from internal fields

The screenshot displays a survey editor interface. At the top, there is a blue header with the text 'Add Block'. Below this, a block titled 'Block 3' is shown. The block contains a question 'Answer the following question' with a 'Q10' label. The question text is 'I like to conform to others'. Below the question text is a horizontal scale with seven points, each with a radio button. The scale labels are: 'Strongly agree', 'Agree', 'Somewhat agree', 'Neither agree nor disagree', 'Somewhat disagree', 'Disagree', and 'Strongly disagree'. Below the scale, there are two buttons: 'Import Questions From...' and '+ Create a New Question'. A context menu is open on the right side of the block, showing options: 'View Block...', 'Collapse Questions...', 'Lock Block...', 'Question Randomization...', 'Loop & Merge...' (highlighted in blue), 'Next/Previous Button Text...', 'Move Block Up...', 'Move Block Down...', 'Add Block Below', and 'Copy Block...'. The menu also includes a 'Block Options' dropdown. At the bottom of the interface, there is a blue footer with the text 'Add Block'.

LOOP & MERGE

- For the last Block of our survey (the one with conformity question), Block Options → Loop&Merge
- Enter three values of your choice into "Field 1", one per row.
- In the question choice descriptive text, use piped text to set the content from Field 1: `{lm://Field/1}`

reconsider your choice?

Loop & Merge

[Turn off Loop & Merge](#) **Loop & Merge is turned on for this block**
Click "Turn off Loop & Merge" to stop looping

☐ Loop based off of a question:

	Field 1	Field 2
1		
2		
3		

- Javascript
- Programming a multiplayer experiment
- Mturk

Javascript

- Programming language used in web production
- Large variety of functions and libraries
- Interacts with HTML and CSS

SAVING TO AND RETURNING FROM ED

value: internal javascript variable

name: name of the embedded data field

SAVING TO AND RETURNING FROM ED

`value`: internal javascript variable

`name`: name of the embedded data field

use `Qualtrics.SurveyEngine.X` where X is...

`addEmbeddedData('name', value)`; adds embedded data.

`setEmbeddedData('name', value)`; sets the embedded data.

`getEmbeddedData('name')`; returns the embedded data.

SAVING TO AND RETURNING FROM ED

value: internal javascript variable

name: name of the embedded data field

use `Qualtrics.SurveyEngine.X` where X is...

`addEmbeddedData('name', value);` adds embedded data.

`setEmbeddedData('name', value);` sets the embedded data.

`getEmbeddedData('name');` returns the embedded data.

Example:

```
Qualtrics.SurveyEngine.setEmbeddedData("field",  
variable);
```

save variable in embedded data field

USING INTERNAL QUALTRICS FIELDS

Quick access to embedded data:

```
var myData = "$e://Field/myEmbeddedData";
```

Will access myEmbeddedData as string even if it is a numeric.

USING INTERNAL QUALTRICS FIELDS

Quick access to embedded data:

```
var myData = "$e://Field/myEmbeddedData";
```

Will access myEmbeddedData as string even if it is a numeric.

To transform into number, use:

```
var myData = Number("$e://Field/myEmbeddedData") ;
```

EXAMPLE

Save chosen tax rate and calculate after tax income.

- 1 Under Survey flow generate two new embedded data fields: `income=2000` and `aftertaxincome`. Leave value of `aftertaxincome` empty
- 2 Q10 "Answer the following [conformity] question". Add another question on top of it. Add a pagebreak between both questions
- 3 In that question, click "Add Javascript"
- 4 Enter the following code:

The screenshot shows the Qualtrics interface. On the left, a survey flow is visible with 'Block 3' and a 'Loop & Merge' button. Below that, a question 'Q12' is shown with a 'To continue, proceed' button. On the right, the 'Edit Question JavaScript' dialog box is open, displaying the following JavaScript code:

```
Qualtrics.SurveyEngine.addOnload(function()
{
  var income = Number("${e://Field/income}");
  var tax = Number("${q://QID4/ChoiceNumericEntryValue/1}");

  var aftertaxincome=tax*income/100;

  Qualtrics.SurveyEngine.setEmbeddedData("aftertaxincome", aftertaxincome);
  // use alert(aftertaxincome); to return in pop-up box
});
```

Add an output of `aftertaxincome`
Test your survey

Random Round Payoffs

There is no built-in feature for random round payoff selection.

Random Round Payoffs

There is no built-in feature for random round payoff selection.

- 1 Store each round's payoff as a separate embedded data field.

Random Round Payoffs

There is no built-in feature for random round payoff selection.

- 1 Store each round's payoff as a separate embedded data field.
- 2 Must create separate embedded data fields for the randomly selected payoffs.

Random Round Payoffs

There is no built-in feature for random round payoff selection.

- 1 Store each round's payoff as a separate embedded data field.
- 2 Must create separate embedded data fields for the randomly selected payoffs.
- 3 After storing all payoffs, within javascript we return payoffs in an array.

Random Round Payoffs

There is no built-in feature for random round payoff selection.

- 1 Store each round's payoff as a separate embedded data field.
- 2 Must create separate embedded data fields for the randomly selected payoffs.
- 3 After storing all payoffs, within javascript we return payoffs in an array.
- 4 Then, randomly sort the array order using `ARRAYNAME.sort(function() { return 0.5 - Math.random() });`.

Random Round Payoffs

There is no built-in feature for random round payoff selection.

- 1 Store each round's payoff as a separate embedded data field.
- 2 Must create separate embedded data fields for the randomly selected payoffs.
- 3 After storing all payoffs, within javascript we return payoffs in an array.
- 4 Then, randomly sort the array order using `ARRAYNAME.sort(function() { return 0.5 - Math.random() });`.
- 5 Save choice of elements from sorted array.

Pay two out of three rounds:

```
var pay1 = "${e://Field/pay1}" ;  
var pay2 = "${e://Field/pay2}" ;  
var pay2 = "${e://Field/pay3}" ;  
var array = [pay1, pay2, pay3];  
array.sort( function() { return 0.5 - Math.random() } );  
Qualtrics.SurveyEngine.setEmbeddedData("ranselect1", array[1]);  
Qualtrics.SurveyEngine.setEmbeddedData("ranselect2", array[2]);
```

JAVASCRIPT LIBRARIES

- Can add libraries with pre-built javascript functions
- Go to "Look & Feel" → Advanced → Header
- To embed an external library, the library needs to be hosted externally.

JAVASCRIPT LIBRARIES

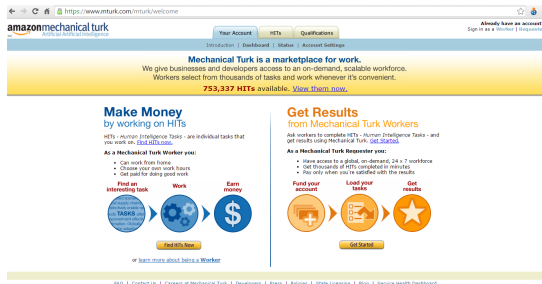
- Can add libraries with pre-built javascript functions
- Go to "Look & Feel" → Advanced → Header
- To embed an external library, the library needs to be hosted externally.

Example: embed the following code into Header (source) to install MathJags package, hosted on cdn.mathjax.org:



SUBJECT RECRUITMENT

- CESS Online
(<https://cess.nuff.ox.ac.uk/cess-online>)
- Amazon Mechanical Turk
- Prolific Academic
- ResponDi.com
- Survey Sampling International (SSI)
- Yougov.com
- Qualtrics.com
- Your own effort
 - Facebook
 - Online message boards



- Amazon Mechanical Turk: Online worker platform for small tasks, hosted by Amazon Web Services
- HIT: Human Intelligence Task
- Batch: A Group of Hits
- Qualification: Researcher-assigned parameter to worker

SUBJECT RECRUITMENT: MTURK

- <https://www.mturk.com/>
- Online labour marketplace
- Who are the workers?
 - Only in the US and India, includes also English speaking countries such as UK and Ireland since recent
 - Worker population in India is a legacy component

LINKING WITH QUALTRICS

Manual Completion Code

The HIT links to the Qualtrics survey. The HIT is considered completed once a subject enters a randomly generated code into Mturk which he/she has received at the end of the survey

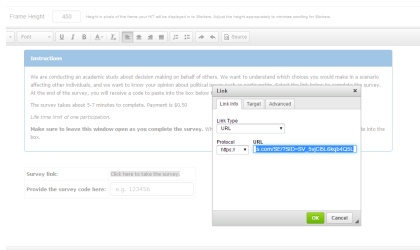
Embedded Mturk Method

The Mturk workers's IDs are passed to Qualtrics via query strings. Data file from Mturk can be manually merged with Qualtrics .csv for payment. Advantage is to rule out false entry and duplicate code.

Dynamic Completion Code

The Mturk workers's IDs are passed to Qualtrics via query strings. Online software such as MturkPrime allows to auto-pay subjects without intervention of the researcher. Mturkprime's core features are

MANUAL COMPLETION



- Under Survey Flow enter embedded
`data:random=${rand://int/1000:9999}`
- Create custom end of survey message that pipes in random at
end of survey
- "Thank you for participating. Your validation code is:
`${e://Field/randomMturk}`"

DYNAMIC COMPLETION

Setup for Qualtrics

1. Create or Edit a Survey
2. Click on "Survey Options"



3. In the Survey Termination Section: Click on Custom end of survey message...



- ☐ Default end of survey message
- ☒ Custom end of survey message...

Secret Key ▼

4. If you have a Secret Key option that you previously created Select it and you are done/ Otherwise, Click New Message
5. Enter Secret Key in the Description field. (Next time you can select this message.)
6. Click the Source

Source

button

7. Paste the following text exactly into the window as shown

```
<iframe src="https://www.TurkPrime.com/TakeLaunchedSurvey/DynamicKey" width="100%" height="200"></iframe>
```

Create a New Message

Category End of Survey Messages ▼

Description Secret Key



```
https://www.turkprime.com/TurkPrime/TakeLaunchedSurvey/DynamicKey" width="100%" height="200"></iframe>
```

8. Click Save

SUBJECT SCREENING

- Manual: After each HIT is finished, assign "Qualification" to subjects. Filter subjects by qualification
- Dynamic by Survey:
 - use script in documents to append workerID query to survey link
 - Use embedded data for IDs
 - Use Branch Logic for those IDs that are on a no-participate list
 - At end of Survey append workerID to auto-referral survey link of same survey
- Dynamic by HIT group
 - navigate to <https://uniqueturker.myleott.com/>
 - retrieve custom html code
 - paste into source of Mturk HIT

